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Brief
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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant(s): Pallesen, Michael R.; Athavale, Vilas M.; Gunapu, Sridhar
Assignee: InsWeb Corporation
Title: System And Method For Flexible Insurance Rating Calculation
Serial No.: 09/521,005 Filing Date: March 7, 2000
Examiner: Carolyn M. Bleck Group Art Unit: 3626
Docket No.: INS0006US

Austin, Texas
May 10, 2004

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Dear Sir:

This brief is submitted in support of the appeal filed March 3, 2004 by the appellants to the Board of Patent Appeals and Interferences from the Examiner's final rejection of claims 1-12, 14-24, and 26-36. The appellants note that the appeal filed March 3, 2003 was received by the USPTO on March 8, 2004, thereby giving the appellants a period for filing set to expire on May 10, 2004 (May 8, 2004 being a Saturday).

Please charge deposit account No. 502306 for the fee of \$165.00 associated with this appeal brief. Please charge this deposit account for any additional sums which may be required to be paid as part of this appeal. This paper is submitted in triplicate.

REAL PARTY IN INTEREST

The real party in interest on this appeal is InsWeb Corporation.

RELATED APPEALS AND INTERFERENCES

There are no appeals or interferences related to this application.

STATUS OF CLAIMS

Claims 1-6, 8-9, 11-12, 14-18, 20-24, 26-30, and 32-36 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Dworkin, U.S. Patent No. 4,992,940 in view of Kennedy, U.S. Patent No. 5,787,453. Claims 7, 10, 19, and 31 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Dworkin and Kennedy in view of Bosco et al., U.S. Patent No. 5,191,522 (Bosco).

STATUS OF AMENDMENTS

No amendments were filed subsequent to the final rejection of November 3, 2003.

SUMMARY OF INVENTION

The invention is as set forth in the claims. To summarize the invention without intending to limit or otherwise affect the scope of the claims, the invention as set forth by independent claim 1 relates to a product rate calculation system including a computer readable medium, a database interface, a product rate information cache, an expression evaluation routine, and a client interface. The computer readable medium is at least one of an electronic storage medium, a magnetic storage medium, an optical storage medium, and a communications medium conveying signals encoding instructions. The database interface is operable to request and receive product rate information from a database, the product rate information including at least one product rate expression. The product rate information cache stores product rate information. The expression evaluation routine is operable to parse a product rate expression stored in the product rate information cache into at least one token, and is also operable to evaluate the at least one token to determine a product rate. The client interface is operable to provide the product rate to a client application running on a computer system. At least one of the database interface, the product rate information cache, the expression evaluation routine and the client interface is encoded in the computer readable medium as instructions executable on the processor. See, e.g., Figure 1, and pages 5-8 of the specification.

The invention as set forth by independent claim 15 (and generally set forth by independent claim 27) relates to a method of calculating a product rate. Product rate

information is loaded, and the product rate information includes at least one product rate expression from a database. The product rate information is stored in a cache. A request is received for a product rate from a client application running on a computer system. The at least one product rate expression stored in the cache is parsed into at least one token. The at least one token is evaluated to determine the product rate. The product rate is transmitted to the client application running on the computer system. See, e.g., Figure 3 and pages 10-12 of the specification.

The invention as set forth by independent claim 26 relates to a system for calculating product rates. The system includes a processor and a memory cache. The processor is configured to request and receive product rate information from a database, the product rate information including at least one product rate expression. The memory cache is configured to store the product rate information including the at least one product rate expression. The processor is further configured to evaluate the at least one product rate expression by parsing the at least one product rate expression into at least one token and evaluating the at least one token to determine a product rate. See, e.g., Figure 1, and pages 5-8 of the specification.

ISSUES

The issue in this appeal is:

Whether claims 1-12, 14-24, and 26-36 are patentable under 35 U.S.C. § 103(a) over Dworkin, Kennedy, and Bosco.

GROUPING OF CLAIMS

For the purposes of this appeal the claims are grouped as follows:

Claims 1-12, 14-24, and 26-36 stand or fall together.

ARGUMENT

Claims 1-6, 8-9, 11-12, 14-18, 20-24, 26-30, and 32-36 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Dworkin, U.S. Patent No. 4,992,940 in view of Kennedy, U.S. Patent No. 5,787,453. Claims 7, 10, 19, and 31 stand rejected under 35

U.S.C. § 103(a) as being unpatentable over Dworkin and Kennedy in view of Bosco et al., U.S. Patent No. 5,191,522 (Bosco). The appellants respectfully traverse these rejections.

Dworkin, Kennedy, and Bosco taken alone or in combination neither teach nor suggest a product rate calculation system including:

- a database interface operable to request and receive product rate information from a database, the product rate information including at least one product rate expression;
- a product rate information cache storing product rate information;
- an expression evaluation routine operable to parse a product rate expression stored in the product rate information cache into at least one token, and operable to evaluate the at least one token to determine a product rate; and
- a client interface operable to provide the product rate to a client application running on a computer system,

as required by independent claim 1 and generally required by independent claims 15, 26, and 27.

Regarding the claimed database interface operable to request and receive product rate information from a database, the Examiner refers to CPU 1 of Dworkin which is connected to database 3. Office Action of May 15, 2003, p. 4, ¶b. Regarding the product rate information including at least one product rate expression, the Examiner refers to various data in Dworkin's database 3 including product list price, lowest price, average price, and shipping information. In particular, the Examiner cites these portions of Dworkin:

For each product, the entries in FIG. 6 include a number which identifies the product, the name of the manufacturer, the manufacturer's model number for the product, the lowest price available among all the vendors in the database, the average price for the product for all the vendors in the database, and the list price for the product. The entries for lowest price and the average price can be calculated anew for each search, by searching the database for each vendor selling a particular item, and noting the price offered by each vendor. Alternatively, these values can be stored in the database, and displayed without recalculating. (column 6, lines 26-37)

...

Block 65 can also include the step of calculating the shipping charges for the product. In the preferred embodiment, the database also includes a detailed table giving shipping charges, as established by a common carrier, for substantially every combination of shipping weights and distances. The system is programmed to calculate the gross shipping weight from a knowledge of the net product weight. The net product weight is preferably part of the detailed specifications of the product. The system adds a predetermined percentage to that weight, to account for the weight of the container, also taking into consideration the number of units which can be packed in one container. The system then determines the shipping charge by consulting its stored table and calculating the amount based on distance and total weight. The system can then display the shipping charge to the user immediately, and can add such charge to the bill. The system can do the same for a C.O.D. charge, if any. (column 8, lines 38-56)

The appellants respectfully disagree with the Examiner's conclusion.

Neither the cited portions of Dworkin, nor any other portion of Dworkin teach or suggest product rate information including at least one product rate expression. None of the referenced pieces of data (e.g., product list price, lowest price, average price, and shipping information) teach or suggest a product rate expression, i.e., an expression that when evaluated yields a product rate. Dworkin does teach that "entries for lowest price and the average price can be calculated anew for each search," but that neither teaches nor suggests that a product rate *expression* exists on the database or that such an expression can be requested and received by a database interface.

In response to similar arguments presented by the appellants, the Examiner refers generally to numerous different sections of Dworkin, and states:

[A] terminal for communicating over a modem with the computer storing the database, wherein the computer accepts inputs from the user, searches the database, and displays the results to the user on the terminal, wherein the database contains information about products and/or services and the vendors who sell them, including a number which identifies the product, the lowest price available among all the vendors in the database, the average price for the product for all vendors in the database, and the list price for the product, wherein the entries for lowest price and the average price are calculated anew for each search by a user by searching the database for each vendor selling a particular item, and noting the price offered by each vendor, including possible quantity discounts, and wherein shipping charges are also calculated for a product by including in the database a detailed table giving shipping charges, as established by a

common carrier, for every combination of shipping weights and distances, and then determining the shipping charges by consulting the stored table and calculating an amount based on distance and time and then displaying the shipping charge to the user

Based on the above passages cited from Dworkin, it is respectfully submitted that in order to calculate a price for a product Dworkin's system performs the following calculation, a form of "product rate expression":

(original price of item) – (discounts based on quantity) + (shipping destination surcharges) + (shipping weight surcharges) = total price.

(Final Office Action of November 3, 2003, p. 3, bottom through p. 4, ¶1)

The appellants respectfully submit that Dworkin neither teaches nor suggests the purported "expression" identified by the Examiner. None of the portions of Dworkin cited by the Examiner teach or suggest this expression, nor do any other portions of Dworkin. Instead, the Examiner has referred to various different calculations performed by Dworkin, and improperly inferred that the "expression" described above is taught by Dworkin.

For example, the Examiner goes on to state that:

Dworkin then discloses providing the total price to a user (Fig. 1-2, 6, col. 3 line 60 to col. 4 line 35, col. 5 lines 35-68, col. 6 lines 11-44 and lines 58-65, col. 7 lines 35-54, and col. 8 lines 38-56). (Final Office Action of November 3, 2003, p. 4, bottom).

The appellants respectfully disagree. Among all of the different sections of Dworkin cited by the Examiner, there are at best only several references to price determinations:

... the entries in FIG. 6 include . . . the lowest price available among all the vendors in the database, the average price for the product for all the vendors in the database, and the list price for the product. The entries for lowest price and the average price can be calculated anew for each search, by searching the database for each vendor selling a particular item, and noting the price offered by each vendor. Alternatively, these values can be stored in the database, and displayed without recalculating. (column 6, lines 26-37)

For each supplier, the system gives the price of the product, including possible quantity discounts. The prices apply to the product model number shown at the beginning of each record. (column 7, lines 27-40)

Block 65 can also include the step of calculating the shipping charges for the product The system can then display the shipping charge to the

user immediately, and can add such charge to the bill. The system can do the same for a C.O.D. charge, if any. (column 8, lines 38-56)

Thus, Dworkin never discloses “providing the total price to a user” as suggested by the Examiner. Note that even the one place where Dworkin describes “calculating prices” (column 6, lines 26-37), Dworkin merely teaches searching a database and noting the price offered by each vendor.

Even if the Examiner is correct in inferring the purported expression outlined above (and the appellants absolutely do not concede this point), the Examiner points to nothing in Dworkin (or any other cited reference) teaching or suggesting that the purported expression *itself* is part of “product rate information from a database,” i.e., that the expression itself is stored in a database. Nowhere does Dworkin teach or suggest storing anything like the Examiner’s “expression” in the database described in the reference. The appellants respectfully submit that neither Dworkin, nor any of the other cited references teach this limitation.

Regarding the claimed product rate information cache storing product rate information, the Examiner refers generally to Dworkin’s database 3. Office Action of May 15, 2003, p. 4, ¶c. The appellants note that the claimed product rate information cache is distinct from the database from which the claimed database interface can request and receive product rate information. Thus, Dworkin’s database 3 cannot teach both the product rate information cache and the database because it is a single database and there is no associated cache functionality taught or suggested.

In response to similar arguments presented by the appellants, the Examiner states for the first time in her Final Office Action of November 3, 2003, p. 6, top:

Although Dworkin does not explicitly recite “a cache”, it is the position of the Examiner that one skilled in the art would have realized that when retrieving data from a database, and then performing any operation on the data such as printing or viewing the data using a printer or computer screen, it would be required to by the computer to store the data in the memory of the computer, such as a printer buffer, video memory, or the

RAM of computer, after retrieving it from the database (i.e., a cache) in order to print or view the data.

In response, the appellants respectfully submit that whether or not one of ordinary skill in the art would have realized the use of temporary memories, e.g., printer buffer, video memory, as suggested by the Examiner (and the appellants do not concede this point), such memories neither teach nor suggest the appellants claimed product rate information cache storing product rate information. First, the Examiner has pointed to nothing suggesting that the temporary memories to which she refers contain product rate information. Second, the Examiner has pointed to nothing suggesting that the temporary memories to which she refers are “caches” within the meaning of the term as understood by one having ordinary skill in the art and as used by the appellants in their claims and specification. Third, the Examiner has pointed to nothing suggesting that the temporary memories to which she refers can store product information that can be accessed by the claimed expression evaluation routine.

Regarding the expression evaluation routine, the Examiner refers to the teachings of Kennedy. In combining the teachings of Dworkin and Kenney, the Examiner states that:

It would have been obvious to one of ordinary skill in the art . . . to add the formula parser of Kennedy to the system of Dworkin with the motivation of providing users with little grasp of computer programming methodologies a way to develop systems to calculate virtually anything of a mathematical nature once they can identify the source of data to be used, a target location for the result, and the fundamental mathematical operations needed to derive the result (Kennedy; col. 3, lines 30-35) and providing a system that allows a user to determine the best price available for a product or service meeting a set of specifications (Dworkin; col. 1 lines 5-60). Office Action of May 15, 2003, pp. 5-6.

The appellants respectfully submit that the Examiner has failed to establish a *prima facie* case of obviousness. In addition to the claim elements not taught or suggested by the cited references as described above, the Examiner has not shown that there is some suggestion or motivation to combine Dworkin and Kennedy, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art.

The Examiner merely points to the respective motivations/advantages of the two references, but points to no motivation or suggestion for the *combination* of the references. There is nothing in “providing a system that allows a user to determine the best price available for a product or service meeting a set of specifications” that motivates a combination with the formula parsing of Kennedy, and there is similarly nothing in “providing users with little grasp of computer programming methodologies a way to develop systems to calculate virtually anything of a mathematical nature once they can identify the source of data to be used, a target location for the result, and the fundamental mathematical operations needed to derive the result” that motivates a combination with the system for determining the best price available for a product or service of Dworkin. Moreover, the appellants respectfully submit that the Examiner has failed to explain what specific understanding or technological principle within the knowledge of one of ordinary skill in the art would have suggested the combination, as required by, for example, *In re Rouffet*, 47 USPQ2d 1453 (Fed. Cir. 1998).

In response to similar arguments presented by the appellants, the Examiner states in her Final Office Action of November 3, 2003, p. 7, ¶2:

. . . the Examiner has clearly shown that motivation for combining or modifying the applied references existed in the prior art as shown at pages 4-5 of the previous Office Action. In addition, all the modifications proposed by the Examiner are taught by the applied references and that knowledge generally available to one of ordinary skill in the art. Therefore, the combination of references is proper and the rejection is maintained. (Emphasis in original)

In essence, the Examiner’s response to the appellants’ previous arguments is no response at all. The Examiner merely refers back to her previous arguments and makes the conclusory statement that the combination is “taught by the applied references and that knowledge generally available to one of ordinary skill in the art.” However, the Examiner fails to: (1) articulate what specific understanding or technological principle within the knowledge of one of ordinary skill in the art would have suggested the combination, and (2) demonstrate how the references themselves teach such a combination.

Accordingly, the appellants respectfully submit that independent claims 1, 15, 26, and 27 are allowable over Dworkin, Kennedy, and Bosco taken alone or in combination. Claims 2-12 and 14 depend from claim 1 and are allowable for at least this reason. Claims 16-24 depend from claim 15 and are allowable for at least this reason. Claims 28-36 depend from claim 27 and are allowable for at least this reason.

CONCLUSION

The appellants respectfully submit that claims 1-12, 14-24, and 26-36 are allowable over Dworkin, Kennedy, and Bosco taken alone or in combination. For at least the reasons stated above, claims 1-12, 14-24, and 26-36 are allowable. The appellants respectfully request that the Board reverse the rejections of these claims.

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Attorney for Appellant(s)


5/10/04

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Respectfully submitted,



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APPENDIX

1 1. (Previously Presented) A product rate calculation system comprising:
2 a processor;
3 computer readable medium, wherein the computer readable medium is at least one
4 of an electronic storage medium, a magnetic storage medium, an optical
5 storage medium, and a communications medium conveying signals
6 encoding instructions;
7 a database interface operable to request and receive product rate information from
8 a database, the product rate information including at least one product rate
9 expression;
10 a product rate information cache storing product rate information;
11 an expression evaluation routine operable to parse a product rate expression
12 stored in the product rate information cache into at least one token, and
13 operable to evaluate the at least one token to determine a product rate; and
14 a client interface operable to provide the product rate to a client application
15 running on a computer system, wherein at least one of the database
16 interface, the product rate information cache, the expression evaluation
17 routine and the client interface is encoded in the computer readable
18 medium as instructions executable on the processor.

1 2. (Original) The product rate calculation system of claim 1 wherein the product
2 rate information includes at least one multi-dimensional table of data.

1 3. (Original) The product rate calculation system of claim 2 wherein at least one
2 dimension of the at least one multi-dimensional table is indexed by consumer information
3 provided to the client interface.

1 4. (Original) The product rate calculation system of claim 1 wherein the at least
2 one token is a plurality of tokens, at least one of the plurality of tokens being an operand,
3 and at least one other of the plurality of tokens being an operator.

1 5. (Original) The product rate calculation system of claim 4 wherein the operand
2 is one of a constant numeric value, a variable, a logic value, a function, and a string; and
3 wherein the operator is one of a numeric operator and a logic operator.

1 6. (Original) The product rate calculation system of claim 4 wherein the operand
2 and the operator are arranged in the product rate expression following one of post-fix,
3 pre-fix, and in-fix notation.

1 7. (Original) The product rate calculation system of claim 1 wherein product rate
2 information is insurance product rate information.

1 8. (Original) The product rate calculation system of claim 1 wherein the
2 expression evaluation routine uses consumer information provided to the client interface
3 to evaluate the at least one token.

1 9. (Original) The product rate calculation system of claim 1 further comprising a
2 client application running on a computer system and being configured to:
3 provide product information, including the product rate, to a user;
4 provide consumer information to the client interface; and
5 receive the product rate.

1 10. (Original) The product rate calculation system of claim 9 wherein the product
2 information is product information for at least one of home insurance, life insurance,
3 health insurance, automobile insurance, and renter's insurance.

1 11. (Original) The product rate calculation system of claim 9 wherein the client
2 application running on a computer system is a web server application.

1 12. (Original) The product rate calculation system of claim 11 further comprising
2 a web-client computer system, the computer system and the web-client computer system
3 being coupled via a network.

1 13. Cancelled.

1 14. (Original) The product rate calculation system of claim 1 further comprising a
2 database operable to receive a product rate information request from the database
3 interface and provide product rate information to the database interface, the database
4 including at least one of the product rate expression, a multi-dimensional table of data,
5 and a numeric value stored as a database record.

1 15. (Previously Presented) A method of calculating a product rate comprising:
2 loading product rate information including at least one product rate expression
3 from a database;
4 storing the product rate information in a cache;
5 receiving a request for a product rate from a client application running on a
6 computer system;
7 parsing the at least one product rate expression stored in the cache into at least
8 one token;
9 evaluating the at least one token to determine the product rate; and
10 transmitting the product rate to the client application running on the computer
11 system.

1 16. (Original) The method of claim 15 wherein the product rate information
2 includes at least one of a multi-dimensional table of data and a numeric value.

1 17. (Original) The method of claim 15 wherein the product rate information is
2 stored as a plurality of records in the database.

1 18. (Original) The method of claim 15 wherein the receiving a request further
2 comprises receiving consumer information from the client application running on the
3 computer system, the consumer information being used to evaluate the at least one token
4 to determine the product rate.

1 19. (Original) The method of claim 15 wherein the product rate information is
2 insurance product rate information.

1 20. (Original) The method of claim 15 wherein the loading and storing are
2 performed once, and wherein the receiving, parsing, evaluating, and transmitting are
3 performed a plurality of times.

1 21. (Original) The method of claim 15 wherein the at least one token is a
2 plurality of tokens, at least one of the plurality of tokens being an operand, and at least
3 one other of the plurality of tokens being an operator.

1 22. (Original) The method of claim 21 wherein the operand is one of a constant
2 numeric value, a variable, a logic value, a function, and a string; and wherein the operator
3 is one of a numeric operator and a logic operator.

1 23. (Original) The method of claim 21 wherein the operand and the operator are
2 arranged in the product rate expression following one of post-fix, pre-fix, and in-fix
3 notation.

1 24. (Original) The method of claim 15 wherein the evaluating the at least one
2 token to determine the product rate further comprises at least one of:
3 performing a mathematical operation;
4 performing a logical operation; and
5 retrieving data from a multi-dimensional table of data stored in the cache.

1 25. Cancelled.

1 26. (Original) A system for calculating product rates comprising:
2 a processor configured to request and receive product rate information from a
3 database, the product rate information including at least one product rate
4 expression; and

5 a memory cache configured to store the product rate information including the at
6 least one product rate expression; the processor being further configured to
7 evaluate the at least one product rate expression by parsing the at least one
8 product rate expression into at least one token and evaluating the at least
9 one token to determine a product rate.

1 27. (Previously Presented) A computer readable medium comprising program
2 instructions executable on a processor for calculating a product rate, the computer
3 readable medium being one of an electronic storage medium, a magnetic storage medium,
4 an optical storage medium, and a communications medium conveying signals encoding
5 the instructions, wherein the program instructions are operable to implement each of:
6 loading product rate information including at least one product rate expression
7 from a database;
8 storing the product rate information in a cache;
9 receiving a request for a product rate from a client application running on a
10 computer system;
11 parsing the at least one product rate expression stored in the cache into at least
12 one token;
13 evaluating the at least one token to determine the product rate; and
14 transmitting the product rate to the client application running on the computer
15 system.

1 28. (Previously Presented) The computer readable medium of claim 27 wherein
2 the product rate information includes at least one of a multi-dimensional table of data and
3 a numeric value.

1 29. (Previously Presented) The computer readable medium of claim 27 wherein
2 the product rate information is stored as a plurality of records in the database.

1 30. (Previously Presented) The computer readable medium of claim 27 wherein
2 the receiving a request further comprises receiving consumer information from the client
3 application running on the computer system, the consumer information being used to

4 evaluate the at least one token to determine the product rate.

1 31. (Previously Presented) The computer readable medium of claim 27 wherein
2 the product rate information is insurance product rate information.

1 32. (Previously Presented) The computer readable medium of claim 27 wherein
2 the loading and storing are performed once, and wherein the receiving, parsing,
3 evaluating, and transmitting are performed a plurality of times.

1 33. (Previously Presented) The computer readable medium of claim 27 wherein
2 the at least one token is a plurality of tokens, at least one of the plurality of tokens being
3 an operand, and at least one other of the plurality of tokens being an operator.

1 34. (Previously Presented) The computer readable medium of claim 33 wherein
2 the operand is one of a constant numeric value, a variable, a logic value, a function, and a
3 string; and wherein the operator is one of a numeric operator and a logic operator.

1 35. (Previously Presented) The computer readable medium of claim 33 wherein
2 the operand and the operator are arranged in the product rate expression following one of
3 post-fix, pre-fix, and in-fix notation.

1 36. (Previously Presented) The computer readable medium of claim 27 wherein
2 the evaluating the at least one token to determine the product rate further comprises at
3 least one of:

4 performing a mathematical operation;
5 performing a logical operation; and
6 retrieving data from a multi-dimensional table of data stored in the cache.